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10/024,438	12/18/2001	Yimin Niu	RR-1752	3278

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EXAMINER

MILLER, BRIAN E

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 01/30/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/024,438

Applicant(s)

NIU ET AL.

Examiner

Brian E. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-22, 24 and 25 is/are rejected.
- 7) ☒ Claim(s) 7 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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Claims 1-25 are pending.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-4, 10, 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (a) claims 3 & 4 recite that either the first piece or the second piece encircle the other piece, renders the claim(s) indefinite, since it is considered that both conditions could not occur at the same time; (b) claim 10 is misdescriptive since the second piece is part of the actuator so it is not readily apparent how it would be "adjoined" to itself. (c) claims 13-17 the phrase "said movable element" lacks antecedent basis; (d) claim 16 the phrase "said frame" lacks antecedent basis.

As claims 13-17 are directed solely to this element, i.e., the "movable element", and are indefinite, the Examiner could not apply prior art to these claims.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-2, 5, 9-12, 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kurihara et al (6,587,313). In so far as these claims are definite and understood, Kurihara et al discloses an apparatus for reading or writing information on a medium, the apparatus (referring mainly to FIGs. 2-3) including: (as per claims 1 & 11) a body 104 having a center of mass, a surface 108a, and an electromagnetic transducer 109; an actuator 200 disposed adjacent the surface and including a first piece 200c (stator); a plurality of deformable elements 200b coupled to the first piece; a second piece 200a (rotor) coupled to the deformable elements; wherein each of the deformable elements have a shape that changes in response to a signal to rotate the second piece relative to the first piece about an axis of rotation F2 (see col. 8, lines 15-19); wherein a distance between one of the deformable elements and the axis of rotation is less than a length of the deformable element (evident from FIG. 3), and a distance between the transducer 109 (which is on the tip of the slider) and the axis of rotation is at least several times greater than the distance between the deformable element and the axis of rotation (again, evident from the FIGs.); (as per claims 2 & 12) wherein the second piece 200a is coupled to the body so that the axis of rotation is substantially aligned with the center of mass (see col. 6, lines <sup>58-59</sup>~~18-19~~); (as per claim 5) wherein each deformable element extends between the first and second piece and a length is at least several times larger than a distance between the deformable element and the axis of rotation; (as per claim 9) wherein a suspension 108a is coupled to the first piece and includes a fulcrum that is aligned with the axis of rotation (see col. 6, lines 56-59); (as per claim 10) a conductive adhesive layer 108h which is considered to have inherent damping characteristics, adjoins second piece 200c to the actuator (see col. 7, lines 58-62); (as per claim 18) a thin piece of material

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(unnumbered FIG. 5) which is considered to have damping characteristics adjoins the two deformable elements.

5. Claims 1-3, 5-6, 8-12, 18-22, 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Soeno et al (US 6,246,552). In so far as these claims are definite and understood, Soeno et al discloses an apparatus for reading or writing information on a medium, the apparatus (referring mainly to FIGs. 4 & 5) including: (as per claims 1, 11 & 19-20) a body 2 having a center of mass, a surface (unnumbered), and an electromagnetic transducer 1; an actuator 4 disposed adjacent the surface and including a first piece 43 (stator/frame); a plurality of deformable elements 41/45 coupled to the first piece; a second piece 44 (rotor/movable element) coupled to the deformable elements; wherein each of the deformable elements have a shape that changes in response to a signal to rotate the second piece relative to the first piece about an axis of rotation (see col. 19, lines 52-67); wherein a distance between one of the deformable elements and the axis of rotation is less than a length of the deformable element (evident from the FIGs.), and a distance between the transducer 1 (which is on the tip of the slider) and the axis of rotation is at least several times greater than the distance between the deformable element and the axis of rotation (again, evident from the FIGs.); (as per claims 2 & 12) wherein the second piece 4 is coupled to the body so that the axis of rotation is substantially aligned with the center of mass; (as per claim 3) wherein the first piece 43 includes a frame that encircles the second piece 44; (as per claims 5 & 21) wherein each deformable element extends between the first and second piece and a length is at least several times larger than a distance between the deformable element and the axis of rotation; (as per claims 6 & 22) wherein the

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second piece/movable member 44 extends outward from the center of rotation an extent that is at least several times larger than a distance between the deformable elements and the axis of rotation (as is evident from the FIGs.); (as per claims 8 & 24) wherein the deformable elements has material disposed contiguously between the frame 43 and the movable element 44 along a straight line aligned with the axis of rotation; (as per claims 9 & 25) wherein a suspension 3 is coupled to the first piece and includes a fulcrum that is aligned with the axis of rotation; (as per claim 10) a bonding adhesive layer (see col. 17, line 5) which is considered to have inherent damping characteristics, adjoins second piece 44 to the slider; (as per claim 18) the material of 44 which is considered to have damping characteristics adjoins the two (or more) deformable elements.

***Allowable Subject Matter***

6. Claims 7 & 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Miller whose telephone number is (703) 308-2850. The examiner can normally be reached on M-TH 7:15am-4:45pm (and every other friday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

A handwritten signature in black ink, appearing to read "B. E. Miller", is positioned above the printed name and title.

**Brian E. Miller**  
**Primary Examiner**  
**Art Unit 2652**

Bem  
January 23, 2004